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June 24, 2002

164204.UT.30

California Regional Water Quality Control Board,
San Francisco Bay Region
Gary J. Riley
1515 Clay Street, Suite 1400
Oakland, California 94612

Subject: Request for Closure of Underground Storage Tank 730 in Investigation Area C3

Dear Mr. Riley:

This letter documents information to support permanent closure of underground storage tank (UST) 730. A brief summary of UST 730 has been provided below. The information pertaining to UST 730 has been summarized from the *Removal Summary Report for Underground Storage Tank Site 730* dated December 21, 1998. The relevant pages from this report are provided in Attachment 1 to this letter.

UST 730 was a 15-gallon steel tank, 12 inches in diameter and 30 inches long, located southeast of Building 730. This UST was likely installed to supply fuel for the emergency diesel generator inside Building 730. The tank had been abandoned and was rediscovered in 1996 during a routine inspection for building closure.

After receiving a permit from the Solano County Department of Environmental Management (provided in Attachment 1), UST 730 and the associated piping were removed on July 2, 1998. The capacity of the UST was unknown until it was removed. The tank appeared intact and contained 4 gallons of unknown liquid. The tank contents were not sampled. The soil beneath the removed tank was noted to have mild petroleum odors and was suspected to be contaminated from an accumulation of incidental spilling during tank filling. The area was excavated to a depth of 6 feet below ground surface (bgs), which was approximately 2 feet below the bottom of the tank. On August 4, 1998, a soil sample was collected from the floor of the excavation (6 feet bgs) directly beneath where the UST had been located. The soil sample was analyzed for total petroleum hydrocarbons (TPH)-fuel-oil, benzene, toluene, ethylbenzene, total xylenes (BTEX), and oil and grease. TPH-fuel-oil was detected at a concentration of 112 milligrams per kilogram (mg/kg), and oil and grease were detected at a concentration of 390 mg/kg. No BTEX was detected above the laboratory reporting limit in this soil sample. The excavation widened (3.5 by 7 feet) and extended down to 9 feet bgs, and another soil sample was collected from the floor of the excavation on October 16, 1998. This soil sample was analyzed for TPH-gasoline:diesel and oil and grease. TPH-gasoline:diesel was not detected

above the laboratory reporting limit in this soil sample. Oil and grease was detected at a concentration of 16 mg/kg. No abrasive blast material was identified in the soil during the tank excavation. The excavation was backfilled with aggregate road base to bring the site back to original grade.

No groundwater sample was collected during the removal of UST 730 because groundwater was not encountered. Soil leaching screening criteria to address potential leaching of chemicals from vadose-zone soils and subsequent impact on groundwater were developed in 2001 by the Regional Water Quality Control Board (RWQCB) and provided in the guidance document *Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater*. Because the soil leaching screening criteria were developed using very conservative assumptions, TPH contamination detected in soil at concentrations less than these values is not expected to impact groundwater. Therefore, groundwater samples are not necessary if soil concentration data (including any previously excavated soil contamination) at a site have not exceeded the soil leaching screening criteria. The Risk-Based Screening Levels (RBSLs) developed for protection of groundwater from soil leaching of TPH-diesel and TPH-fuel-oil are 500 mg/kg. The maximum TPH-fuel-oil detected at UST 730 was a concentration of 112 mg/kg (at 6 feet bgs); this soil contamination was removed when the excavation was extended to 9 feet bgs (at 9 feet bgs, TPH was not detected). Therefore, due to the low concentration of TPH detected in the soil under UST 730, groundwater samples are not warranted at this site.

In 1998, the Navy requested concurrence from the RWQCB and the Department of Toxic Substances Control (DTSC) that no further action is required to close UST 730 in the *Removal Summary Report for Underground Storage Tank Site 730* (Attachment 1). Regulatory agency comments have not been received on that removal summary report. The Navy concluded in the removal summary report that no further action was required to close UST 730 for the following reasons: the tank was removed intact, contamination was likely due to spillage, no pipes associated with the UST were left in place that could be a potential source of contamination, and the concentrations of TPH in the soil are considered too low to have a significant impact on human health and the environment, including groundwater.

An Application to Close an Underground Storage Tank for Hazardous Substances has been submitted to the Solano County Department of Environmental Management (provided in Attachment 1 to this letter). In addition, applications to permanently close UST 730 (UST Permit Applications – Form A and Form B) were submitted to the RWQCB along with a Site Summary Form (provided in Attachment 1 to this letter). The Closure Inspection Report for UST 730 is provided in Attachment 2 to this letter. The required Site Summary Form for input into the RWQCB UST database and the associated electronic submittal is provided in Attachment 3 to this letter.

Based on previous Navy's site investigations and submittals, UST 730 is appropriate for permanent closure because:

- UST 730 stored diesel fuel and had a capacity of only 15 gallons.
- The intact UST at Building 730 and associated piping were removed on July 2, 1998. Subsequent excavations removed TPH-impacted soil.
- TPH concentrations detected in soil at 6 feet bgs were below the RWQCB Tier 1 risk-based screening level.
- TPH was not detected at concentrations greater than laboratory reporting limits at 9 feet bgs.
- Groundwater was not encountered in the 9 feet bgs excavation.
- Based on soil analytical data, no impact to groundwater is expected; the maximum detected TPH concentration did not exceed the RWQCB soil leaching screening criteria.
- The site presents no significant risk to human health or the environment.

We request your timely review (within 30 days) and concurrence with this request for closure of UST 730. This site is located within Investigation Area C3 (IA C3). The Draft Remedial Action Plan submittal date for IA C3 is April 2003. Call me at (510) 251-2888 ext. 2039 or Carla Duncan at (510) 251-2888 ext. 2264 if you have any questions.

Sincerely,

CH2M HILL

Jeffery C. Morris, P.E.

SFO\UST730_NFAltr_SRreview.doc
Enclosures

Copy to (with enclosures):

Mr. Chip Gribble
California Environmental
Protection Agency
DTSC
700 Heinz Avenue, Suite 200
Berkeley, CA 94710-2737

Mr. Henry Chui
California Environmental
Protection Agency
DTSC
700 Heinz Avenue, Suite 200
Berkeley, CA 94710-2737

Ms. Carolyn d'Almeida
U.S. EPA
CSO Mare Island, Building 535
Vallejo, CA 94592

Ms. Myrna Hayes
RAB Co-Coordinator
816 Branciforte Street
Vallejo, CA 94590

Mr. Bill Moore
Lennar Mare Island
900 Walnut Avenue, Qtrs. D
Vallejo, CA 94592

Mr. Gil Hollingsworth
Mare Island Conversion Division
City of Vallejo
555 Santa Clara Street
Vallejo, CA 94590-5934

Mr. Gordon Hart
Paul, Hastings, Janofsky, Walker, LLP
55 Second Street, 24th Floor
San Francisco, CA 94105-3411

Mr. Mike Bartunek
Mare Island CSO Office
Walnut Avenue, Building 535
Vallejo, CA 94592
(2 copies)

Additional CH2M HILL copies:
Jeff Morris
Melanie Goode
Sarah Reindel
Jill Bensen
Tom Corontzos
Carla Duncan

Copy to (without enclosures):

Mr. Al Netto
Solano County Department of
Environmental Management
601 Texas Street
Fairfield, Ca 94533

Attachment 1

DRAFT

~~NFT 305~~
TTX004

VID# 00820

~~UST 35~~

REMOVAL SUMMARY REPORT for UNDERGROUND STORAGE TANK SITE 730

FORMER MARE ISLAND NAVAL SHIPYARD VALLEJO, CALIFORNIA

Prepared for:

Naval Facilities Engineering Command
Engineering Field Activity, West
900 Commodore Drive
San Bruno, California 94066-5006
Engineer-in-Charge: Terry Lau

Prepared by: Virgilio D. Ibarra
P.O. Box 2135
SSPORTS Environmental Detachment
Vallejo, California 94592-0135

December 21, 1998

~~NFT 305~~
TTX004

DRAFT

~~NFT 303~~
TTX004

VID# 00820

REMOVAL SUMMARY REPORT for UNDERGROUND STORAGE TANK SITE 730

FORMER MARE ISLAND NAVAL SHIPYARD VALLEJO, CALIFORNIA

Prepared for:

Naval Facilities Engineering Command
Engineering Field Activity, West
900 Commodore Drive
San Bruno, California 94066-5006
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P.O. Box 2135
SSPORTS Environmental Detachment
Vallejo, California 94592-0135

December 21, 1998

~~NFT 303~~
TTX004

DRAFT

REMOVAL SUMMARY REPORT for UNDERGROUND STORAGE TANK SITE 730

FORMER MARE ISLAND NAVAL SHIPYARD VALLEJO, CALIFORNIA

Prepared for:

Naval Facilities Engineering Command
Engineering Field Activity, West
900 Commodore Drive
San Bruno, California 94066-5006
Engineer-in-Charge: Terry Lau

Prepared by: Virgilio D. Ibarra
P.O. Box 2135
SSPORTS Environmental Detachment
Vallejo, California 94592-0135

December 21, 1998

DRAFT

Removal Summary Report for Underground Storage Tank Site 730 at Former Mare Island Naval Shipyard Vallejo, California

Prepared by:

Virgilio Ibarra, Environmental Engineer
SSPORTS Environmental Detachment

12/23/98
Date

Reviewed and Approved by:

Augustin Rodriguez, UST Project Manager
SSPORTS Environmental Detachment

1/8/99
Date

Russ Finlinson, UST Program Manager
SSPORTS Environmental Detachment

1/14/99
Date

1.0 INTRODUCTION

This Summary Report provides information regarding the removal of an underground storage tank (UST), designated as UST 730, located at Mare Island, Vallejo, CA. It has been prepared by SSPORTS Environmental Detachment of Vallejo for the Naval Facilities Engineering Command, Engineering Field Activity West (EFA West), San Bruno, CA. The summary report is comprised of brief discussions on site description, tank removal, soil sampling, and recommendation of future action for the site. UST 730 is steel tank, 12 inches in diameter, 30 inches long, and has a calculated capacity of 15 gallons.

2.0 SITE DESCRIPTION

2.1 SITE HISTORY

Visual inspection of a particular building is routinely conducted at Mare Island as part of a process to ascertain the initial environmental condition of the building. Inspection results are used to determine the appropriate course of action, if any is required, to remove threats to human health and to the environment of all chemical hazards found before the property is transferred to the City of Vallejo. In late 1996, during the visual inspection of Building 730, which is an electrical distribution center, a 1 1/2-inch diameter capped pipe was found protruding from the ground near the southeast corner of the building. The cap was removed, and petroleum odor was noticed coming from within the pipe (later identified as a fill pipe). Further investigation revealed another nearby vent pipe attached to the side of the building, leading from the ground to the roof top, may be related to the previous pipe discovered. It was assumed that there might be an underground storage tank at this site. Records are not available that show a UST was installed at this site nor information as to the size and intended use of such tank. However, an electric utility employee that was interviewed said there was an emergency diesel generator located in the building. Building 730 was built in 1941. A diesel fuel underground storage tank was probably installed to supply the generator after this date. The area was designated as UST Site 730.

2.2 SITE CHARACTERISTICS

UST Site 730 is located southeast of Building 730 and north of Berth 20 at the southern portion of Mare Island. An electrical transformer, enclosed by a chain link fence, is about 15 feet east of the site. This section of Mare Island is situated at an elevation of approximately 10 feet above mean sea level. The general topography is flat. The site and its immediate vicinity are paved with asphalt, and it is adjacent to Building 730. The nearest surface body of water is Mare Island Strait,

which is about 70 feet south of the site. Also, located due south are several industrial crane tracks. Because the crane tracks ground level is higher, some surface run-off is inherently directed towards Building 730. An abandoned electrical rigid metal conduit rises about 2 feet from the ground nearly 3.5 feet south of the site. Figure 1 shows the general location of UST Site 730 at Mare Island.

3.0 UST 730 REMOVAL

3.1 AUTHORITY TO REMOVE THE TANK

3.1.1 EFA West requested SSPORTS Environmental Detachment to remove UST 730.

3.1.2 On May 4, 1998, SSPORTS submitted an application to remove UST 730 to the Solano County, Department of Environmental Management, the local agency implementing the underground storage tank regulations at Mare Island. The State of California Water Resources Control Board was also notified.

3.1.3 On June 2, 1998, the application to remove UST 730 was approved by the local implementing agency. See Appendix C for a copy of the approval letter.

3.2 SITE UST 730 EXCAVATION

3.2.1 UST 730 was removed using work instructions in the SSPORTS *Closure Plan for Steel Underground Storage Tanks* dated July 13, 1995. This work plan also contained the site Health and Safety Plan developed for the protection of the workers and to prevent the spread of contamination to the surrounding areas.

3.2.2 Sometime after June 2, 1998, excavation of the site was started. Because the size of the tank was unknown at the time, an area 7 feet by 4 feet was initially set as the excavation boundary. At about 2 feet deep, the underground storage tank was unearthed. After clearing soil from over and around it, the exposed tank was smaller than expected. It was anticipated that a larger tank, 2,000 gallons capacity, would be at the site. UST 730 was a bare steel tank 12 inches in diameter and 30 inches long with a calculated volume of about 15 gallons.

3.2.3 UST 730 contained 4 gallons of unknown liquid. This liquid was pumped into a 55-gallon drum, which was later emptied into a rail car tank for eventual disposal.

3.2.4 On July 2, 1998, UST 730 was removed from the excavation and transported to Building 637 at Mare Island. Piping connected to the tank includes

supply and return pipes, a fill pipe, and a vent pipe. There were no obvious unwanted holes (from corrosion or material defect) visible in the walls of the tank. UST 730 was washed with a solution of enzyme and tap water, and then rinsed. The cleaned tank was disposed of as scrapped metal.

3.2.5 Mild petroleum odors emanated from the excavation. It was suspected that the soil underneath the tank was contaminated by incidental spills when the tank was being filled and that the contamination accumulated over a long period of time. An additional 2 feet of soil underneath the tank was removed bringing the total depth of the excavation to 6 feet below ground surface. Groundwater was not encountered in the excavation and there were no apparent visible signs of petroleum contamination of the soil at the bottom of the pit.

3.2.6 Abrasive blasting material (green sand) was not found in the excavation.

3.2.7 Based on the results of the first soil sample, it was decided that an additional 3 feet of soil be excavated from the site. The final depth of the pit was 9 feet. The initial excavation boundary was not enlarged.

3.2.8 A total of 9 cubic yards of soil was excavated from the site. This soil was combined with other excavated soils from different UST removal projects at Mare Island, and transported to B and J Landfill in Vacaville, CA as non-hazardous waste.

4.0 SOIL SAMPLING AND ANALYSIS

4.1 SAMPLE COLLECTION

4.1.1 On August 4, 1998, one soil sample was taken from the floor (6 feet deep) of the excavation at the middle of the area where the tank was located. The assigned sample number is UST-730-SS-6'-CF-01. The location and types of analysis required for this sample was directed by the representative of the local implementing agency. The location of this sampling point is shown on Figure 2. Additional soil excavation was done because of the high concentration of oil and grease found by this sample, which is 390 ppm.

4.1.2 On October 16, 1998 after the additional soil removal, a second soil sample, number UST-730-SS-9'-CF01A, was collected from the floor (9 feet) of the excavation at the same location as the first sample. The concentration of oil and grease in this sample was 16 ppm.

4.2 SAMPLE ANALYSIS

4.2.1 The soil samples were shipped to a California certified laboratory, Calscience Environmental Laboratories, Inc Garden Grove, CA for analysis. The laboratory analytical reports and quality assurance analysis along with the Chain of Custody Record for the samples are included in Appendix A of this report. The results of the soil analysis are summarized in Table 1.

4.2.2 The soil samples were analyzed for: 1) Total Petroleum Hydrocarbons (TPH) using fuel oil as a standard; 2) Benzene, Toluene, Xylene and Ethylbenzene (BTX & E); and 3) Oil and Grease.

Table 1. Results of Sample Analysis

Analyte	Soil Sample Number UST-730-SS-6'-CF01 mg/kg (ppm)	Soil Sample Number UST-730-SS-9'-CF01A mg/kg (ppm)	US EPA Method Number
Benzene	ND	NA	5030A/8020A
Toluene	ND	NA	5030A/8020A
Ethylbenzene	ND	NA	5030A/8020A
Xylenes (total)	ND	NA	5030A/8020A
TPH (fuel oil)	112	NA	8015M
TPH (gas:diesel)	NA	ND	8015M
Oil and Grease	390	16	413.1-M

Notes:
1. Soil sample UST-730-SS-6'-CF01 was taken August 4, 1998.
2. Soil sample UST-730-SS-9'-CF01A was taken October 16, 1998.
3. ND - Not Detected at the laboratory reporting limit.
4. NA - Not Analyzed.

5.0 SITE RESTORATION

The excavation was backfilled with aggregate road base to bring the site back to original grade. The asphalt pavement has not been restored.

6.0 RECOMMENDATION

6.1 The source of potential petroleum contamination at UST Site 730, the tank, was removed. UST 730 was an independent unit and not part of any diesel

fuel distribution system. There were no pipes associated with UST 730 left in place that could be sources of contamination. The concentration levels of petroleum contaminants in soil at the site are considered too low to have significant impact on human health and the environment including groundwater. There are no indications, visual or through sample analysis, that contamination spread beyond the boundary of the site. It should be noted that groundwater was not found at the excavation depth and no groundwater samples were taken. It is recommended that no further action is required to close this site.

6.2 Appendix B "Site Information Summary" has been prepared as requested by the Regional Water Quality Control Board.

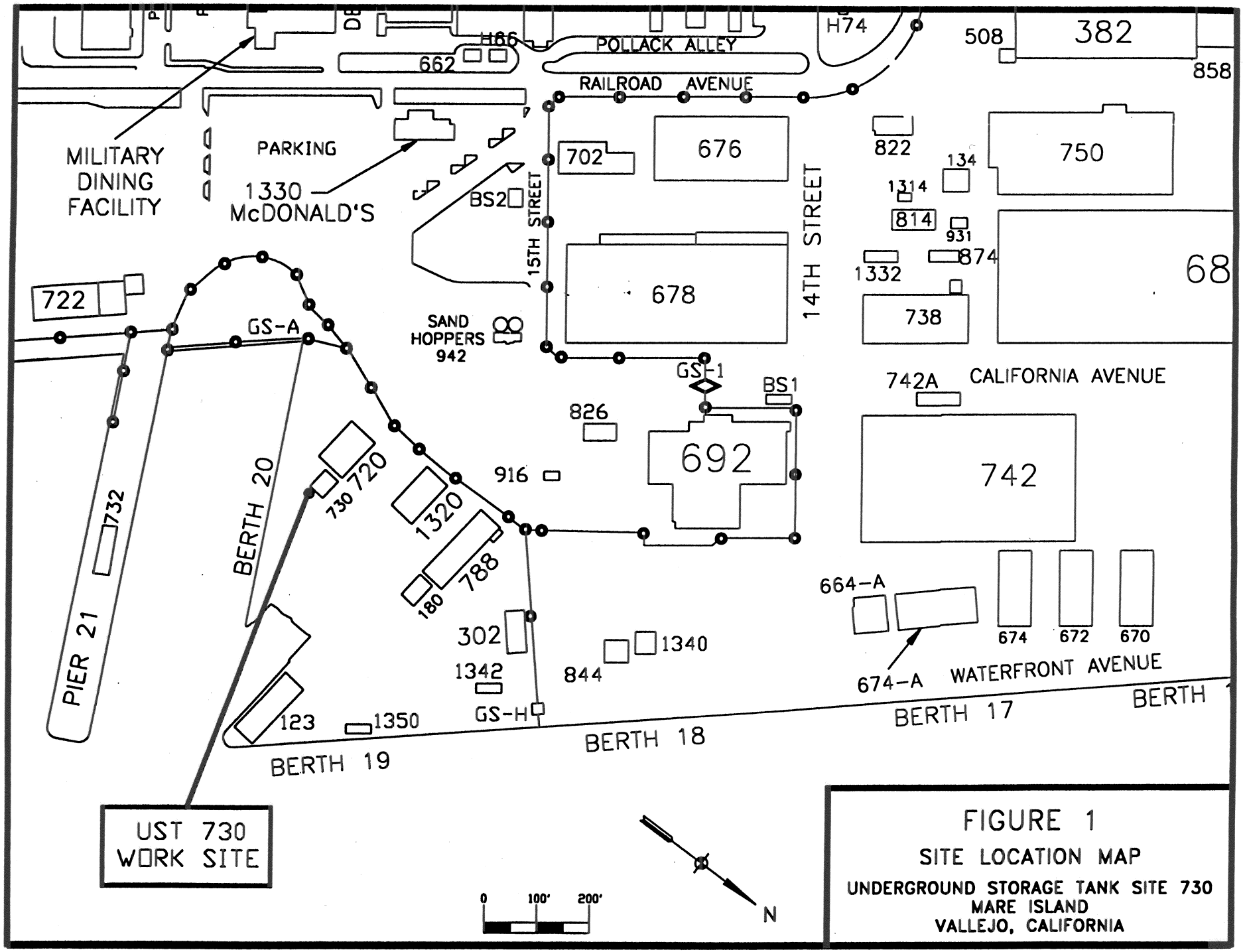


FIGURE 1

SITE LOCATION MAP

UNDERGROUND STORAGE TANK SITE 730
MARE ISLAND
VALLEJO, CALIFORNIA

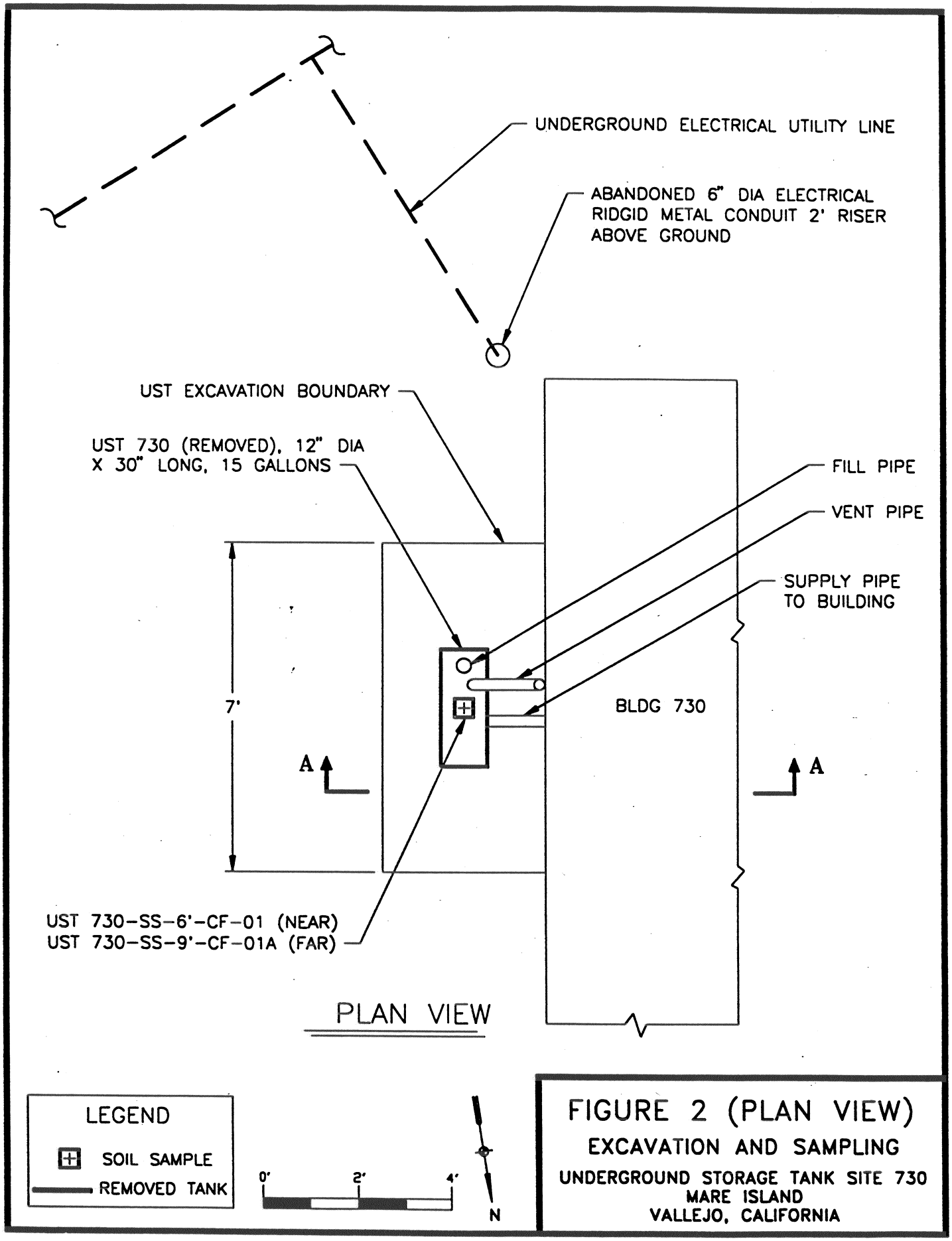
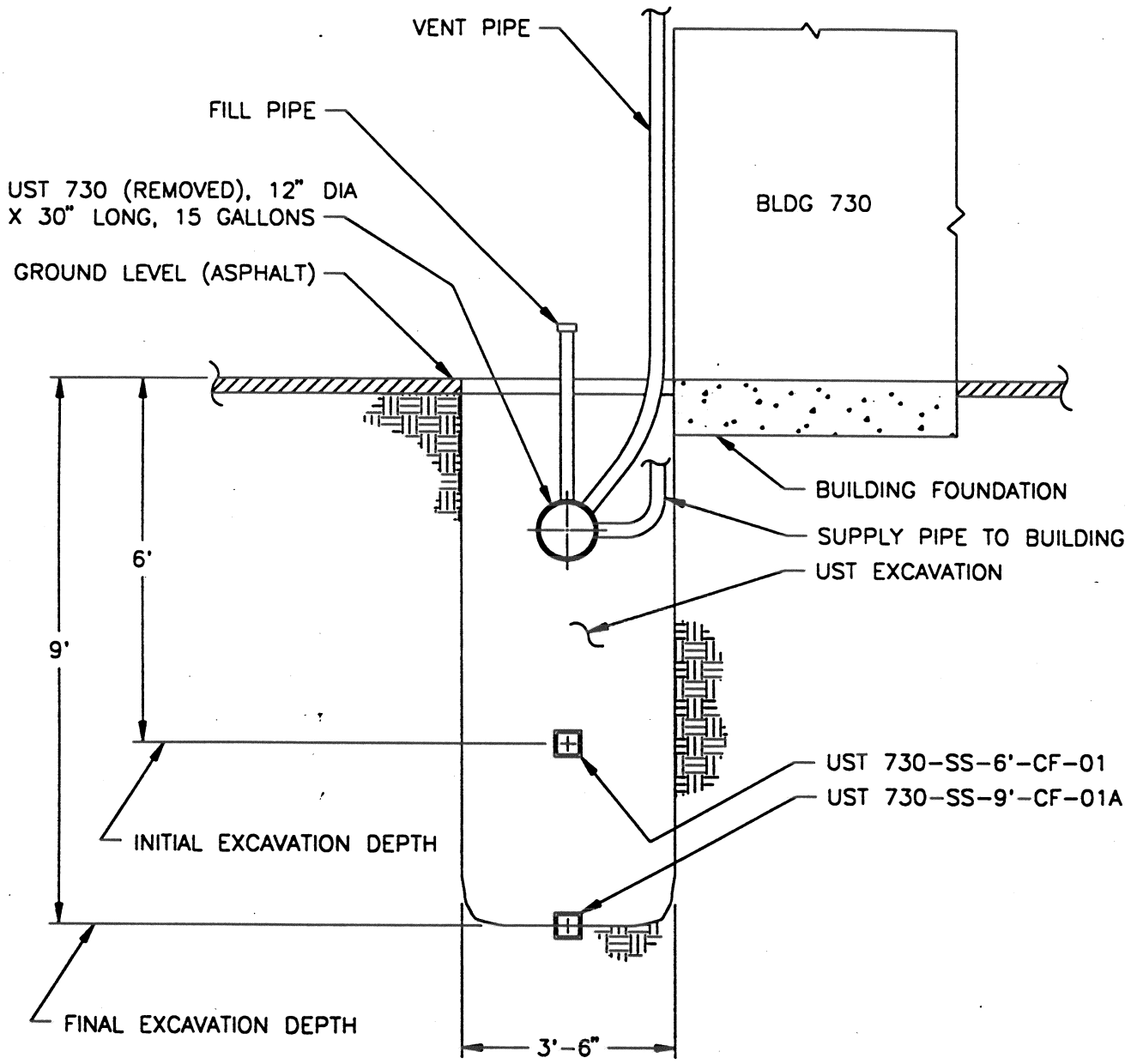


FIGURE 2 (PLAN VIEW)

EXCAVATION AND SAMPLING

UNDERGROUND STORAGE TANK SITE 730
MARE ISLAND
VALLEJO, CALIFORNIA



SECTION A–A

LEGEND

SOIL SAMPLE

REMOVED TANK

0' 2' 4'

FIGURE 3 (SECTION A–A)

EXCAVATION AND SAMPLING

UNDERGROUND STORAGE TANK SITE 730
MARE ISLAND
VALLEJO, CALIFORNIA

SAMPLE LOCATION NUMBER DEFINITION

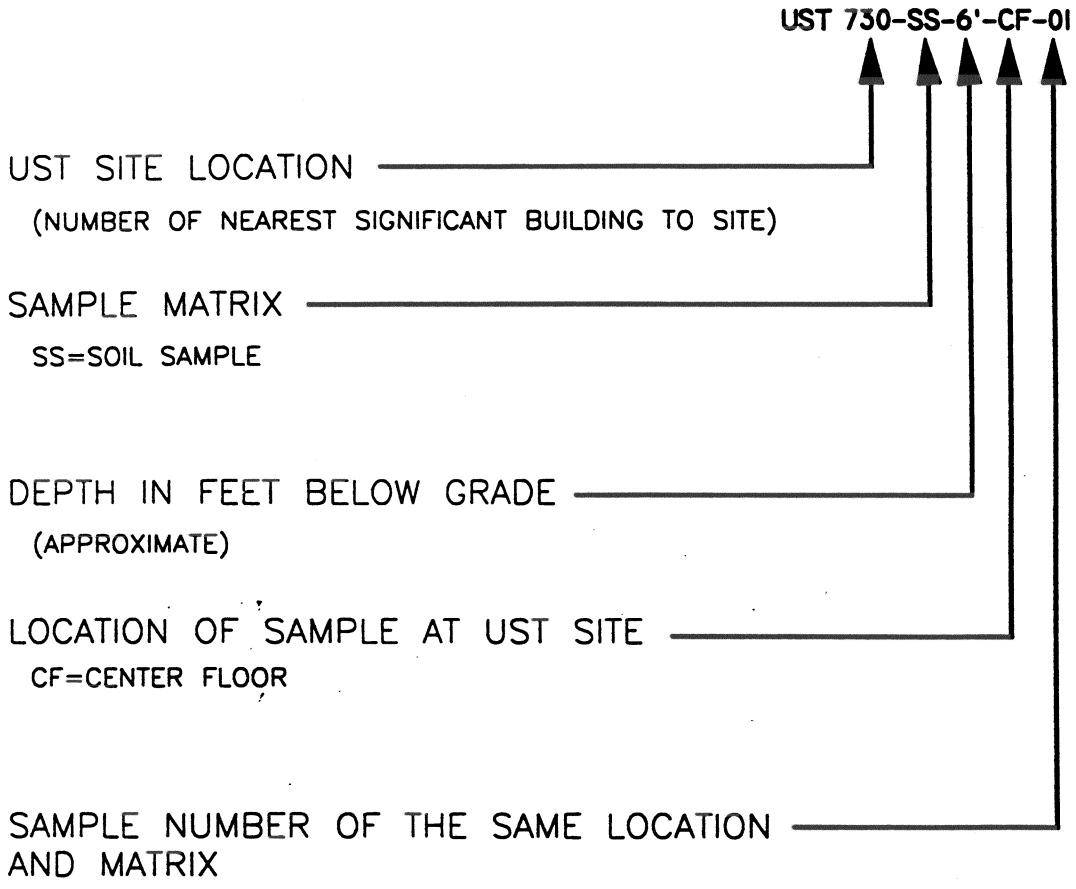
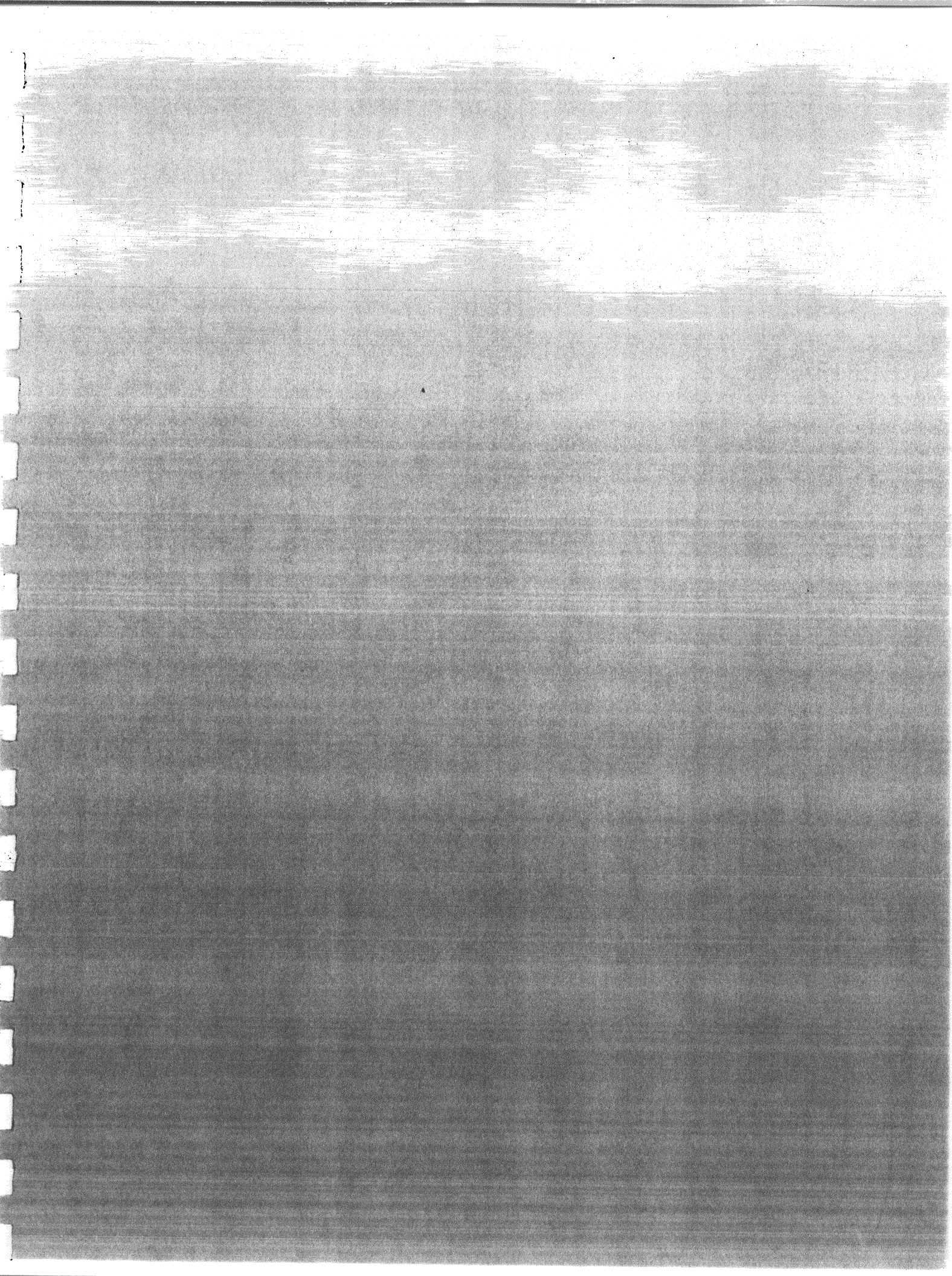


FIGURE 4

SAMPLE NUMBER DEFINITION

UNDERGROUND STORAGE TANK SITE 730
MARE ISLAND
VALLEJO, CALIFORNIA



APPENDIX A

A-1: Analytical Reports of Soil Samples and QA Summary

A-2: Chain of Custody Record

Calscience
Environmental
Laboratories, Inc.

August 18, 1998

Russ Finlinson
Mare Island Naval Shipyard
Building 229, P.O. Box 2135
Vallejo, CA 94592-2135

Subject: **Calscience Work Order Number:** **98-08-0119**
Client Reference: **Contract No. N00244-96-D-2009**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 08/07/98 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested, and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental
Laboratories, Inc.
William H. Christensen
Deliverables Manager

Steven L. Lane
Laboratory Director

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

Mare Island Naval Shipyard	Date Sampled:	08/04/98
Building 229, P. O. Box 2135	Date Received:	08/07/98
Vallejo, CA 94592-2135	Date Analyzed:	08/10/98
	Work Order No.:	98-08-0119
Attn: Russ Finlinson	Method:	EPA 413.1-M
RE: Contract No. N00244-96-D-2009	Page 1 of 1	

All concentrations are reported in mg/kg (ppm).

Sample Number	Oil and Grease Concentration	Reporting Limit
911-98 (UST 541-SS-6'-CF-01)	110	10
912-98 (UST 730-SS-6'-CF-01)	390	10
913-98 (UST A71-SS-7'-CF-01)	10	10
914-98 (UST A71W-SS-9'-CF-02)	60	10
915-98 (UST 541-730-A71 DIRT PILE)	1100	10
Method Blank	ND	10

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-750

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

Mare Island Naval Shipyard	Date Sampled:	08/04/98
Building 229, P. O. Box 2135	Date Received:	08/07/98
Vallejo, CA 94592-2135	Date Extracted:	08/10/98
	Date Analyzed:	08/10-11/98
	Work Order No.:	98-08-0119
Attn: Russ Finlinson	Method:	EPA 8015M
RE: Contract No. N00244-96-D-2009	Page 1 of 1	

All total petroleum hydrocarbon concentrations are reported in mg/kg (ppm) using fuel oil as a standard.

Sample Number	Concentration	Reporting Limit
911-98 (UST 541-SS-6'-CF-01)	130	50
912-98 (UST 730-SS-6'-CF-01)	112	50
913-98 (UST A71-SS-7'-CF-01)	ND	50
914-98 (UST A71W-SS-9'-CF-02)	134	50
915-98 (UST 541-730-A71 DIRT PILE)	762	50
Method Blank	ND	50

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 8015M - FO

Mare Island Naval Shipyard		Work Order No.:	98-08-0119
Page 1 of 1		Date Analyzed:	08/10/98

Matrix Spike/Matrix Spike Duplicate

Sample Spiked: 913-98 (UST A71-SS-7'-CF-01)

Analyte	MS%REC	MSD%REC	Control Limits	%RPD	Control Limits
Total Petroleum Hydrocarbons	85	91	52 - 149	7	0 - 29

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8020A BTXE

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	98-08-0119		
QC Batch ID:	98081701sa	Date Collected:	08/04/98
Matrix:	Solid	Date Received:	08/07/98
Preparation:	EPA 5030A	Date Prepared:	N/A
Method:	EPA 8020A	Date Analyzed:	08/17/98

Client Sample Number: **911-98 (UST541-SS-6'-CF-01)**
Lab Sample Number: 98-08-0119-1

Parameter	Result	RL	Qualifiers	Units
Benzene	ND	0.005		mg/kg
Toluene	ND	0.005		mg/kg
Ethylbenzene	ND	0.005		mg/kg
Xylenes (total)	ND	0.010		mg/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	84	65-140	

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8020A BTXE

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	98-08-0119		
QC Batch ID:	98081701sa	Date Collected:	08/04/98
Matrix:	Solid	Date Received:	08/07/98
Preparation:	EPA 5030A	Date Prepared:	N/A
Method:	EPA 8020A	Date Analyzed:	08/17/98

Client Sample Number: **912-98 (UST730-SS-6'-CF-01)**
Lab Sample Number: 98-08-0119-2

Parameter	Result	RL	Qualifiers	Units
Benzene	ND	0.005		mg/kg
Toluene	ND	0.005		mg/kg
Ethylbenzene	ND	0.005		mg/kg
Xylenes (total)	ND	0.010		mg/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	86	65-140	

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8020A BTXE

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	98-08-0119		
QC Batch ID:	98081701sa	Date Collected:	08/04/98
Matrix:	Solid	Date Received:	08/07/98
Preparation:	EPA 5030A	Date Prepared:	N/A
Method:	EPA 8020A	Date Analyzed:	08/17/98

Client Sample Number: **913-98 (USTA71-SS-7'-CF-01)**
Lab Sample Number: 98-08-0119-3

Parameter	Result	RL	Qualifiers	Units
Benzene	ND	0.005		mg/kg
Toluene	ND	0.005		mg/kg
Ethylbenzene	ND	0.005		mg/kg
Xylenes (total)	ND	0.010		mg/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	87	65-140	

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8020A BTXE

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	98-08-0119		
QC Batch ID:	98081701sa	Date Collected:	08/04/98
Matrix:	Solid	Date Received:	08/07/98
Preparation:	EPA 5030A	Date Prepared:	N/A
Method:	EPA 8020A	Date Analyzed:	08/17/98

Client Sample Number: **914-98 (USTA71W-SS-9'-CF-02)**
Lab Sample Number: 98-08-0119-4

Parameter	Result	RL	Qualifiers	Units
Benzene	ND	0.005		mg/kg
Toluene	ND	0.005		mg/kg
Ethylbenzene	ND	0.005		mg/kg
Xylenes (total)	ND	0.010		mg/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	82	65-140	

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Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8020A BTXE

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	98-08-0119		
QC Batch ID:	98081701sa	Date Collected:	08/04/98
Matrix:	Solid	Date Received:	08/07/98
Preparation:	EPA 5030A	Date Prepared:	N/A
Method:	EPA 8020A	Date Analyzed:	08/17/98

Client Sample Number: **915-98 (UST541-730-A71 Dirt Pile)**
Lab Sample Number: 98-08-0119-5

Parameter	Result	RL	Qualifiers	Units
Benzene	ND	0.005		mg/kg
Toluene	ND	0.005		mg/kg
Ethylbenzene	ND	0.005		mg/kg
Xylenes (total)	ND	0.010		mg/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	71	65-140	

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Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8020A BTXE

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	98-08-0119		
QC Batch ID:	98081701sa	Date Collected:	N/A
Matrix:	Solid	Date Received:	N/A
Preparation:	EPA 5030A	Date Prepared:	N/A
Method:	EPA 8020A	Date Analyzed:	08/17/98

Client Sample Number: **Method Blank**
Lab Sample Number: 098-01-002-198

Parameter	Result	RL	Qualifiers	Units
Benzene	ND	0.005		mg/kg
Toluene	ND	0.005		mg/kg
Ethylbenzene	ND	0.005		mg/kg
Xylenes (total)	ND	0.010		mg/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	65-140	
1,4-Bromofluorobenzene - FID	98	56-136	

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

EPA 8020A BTXE

MS/MSD Batch Number:	98081701ms	Instrument:	GC 21
Matrix:	Solid	Date Extracted:	N/A
Method:	EPA 8020A	Date Analyzed:	08/18/98

Spiked Sample ID: 98-08-0362-4

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	102	39-150	0	0-25	
Toluene	100	98	46-148	2	0-25	
Ethylbenzene	102	102	32-160	0	0-25	
p/m-Xylene	104	103	45-150	1	0-25	
o-Xylene	100	98	45-150	2	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

EPA 8020A BTXE

LCS/LCSD Batch Number:	98081701sa	Instrument:	GC 21
Matrix:	Solid	Date Extracted:	N/A
Method:	EPA 8020A	Date Analyzed:	08/17/98

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	102	39-150	1	0-25	
Toluene	102	101	46-148	0	0-25	
Ethylbenzene	101	103	32-160	1	0-25	
p/m-Xylene	103	105	45-150	1	0-25	
o-Xylene	99	102	45-150	2	0-25	

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GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 98-08-0119

Qualifier	Definition
ND	Not detected at indicated reporting limit.

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WAP98-252

CALSCIENCE ENVIRONMENTAL LABORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92641-1432
TEL: (714) 895-5494 FAX: (714) 894-7501

0119

CHAIN OF CUSTODY

DATE: Aug 5-98 Page: 1 of 1

LABORATORY CLIENT: MINSY

ADDRESS: SSPORTS ENVIRONMENTAL DETACHMENT

CITY: VALLEJO STATE: CA ZIP: 94592-0135

TEL: (707) 562 - 3495 FAX: (707) 562 - 3497

CLIENT PROJECT NAME/NUMBER: UST 541-730-A71 MARE ISLAND

PROJECT CONTACT: ROBERT TURPIN (707) 562-3495

SAMPLER(S): (SIGNATURE) WR Windell

JO # E235

TURN AROUND TIME:

☑ SAME DAY (<6 HRS) 100% ☐ 24 HOURS, 50% ☐ 48 HOURS, 25% ☐ 5 DAYS ☐ 10 DAYS ☑ RUSH WRITTEN REPORT, 10% — C034 APPLIES

1. All turnaround times are based on working hours of 8 a.m., M.-F. 2. Prior confirmation is strongly recommended. 3. 3 days for Tedlar bag samples.

SPECIAL INSTRUCTIONS/REQUIREMENTS:

WRITTEN QC REPORT REQUIRED?
☐ ROUTINE QC ☐ RWQCB QC

SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	WATER Comp	WATER Grab	PRESV HNO3	PRESV Other	Solid/Soil/Filter	No. of Contnrs	ANALYSES REQUIRED
911-98	UST541-SS-6'CF-01	8-4-98	0950		✓		—		1	~~TPHd C018AK OIL & GREASE C022AG VOLATILES C0??~~
912-98	UST-730-SS-6'CF-01	8-4-98	1030		✓		—		1	TPHd C018AK OIL & GREASE C022AG
913-98	USTA71-SS-7'CF-01	8-4-98	1138		✓		—		1	
914-98	USTA71W-SS-9'CF-02	8-4-98	1205		✓		—		1	
915-98	UST541-730-A71 DIRTPILE	8-4-98	1255	✓			—		1	RUSH C034 APPLIES WR Windell

△ 8/6 Remove PER RUSS F.

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
WR Windell	Curt B. Haunn	8-6-98	1400
	Received by: (Signature) [signature]	8/7/98	0730

Unless otherwise requested, all samples will be disposed of 30 days after reciept.

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Appendix A-2

Calscience Environmental Laboratories, Inc.

October 29, 1998

Russ Finlinson
Mare Island Naval Shipyard
Building 229, P.O. Box 2135
Vallejo, CA 94592-2135

Subject: **Calscience Work Order Number:** **98-10-0563**
Client Reference: **Contract No. N00244-96-D-2009**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 10/23/98 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested, and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental
Laboratories, Inc.
William H. Christensen
Deliverables Manager

Steven L. Lane
Laboratory Director

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

Mare Island Naval Shipyard	Date Sampled:	10/16/98
Building 229, P. O. Box 2135	Date Received:	10/23/98
Vallejo, CA 94592-2135	Date Extracted:	10/23/98
	Date Analyzed:	10/24/98
	Work Order No.:	98-10-0563
Attn: Russ Finlinson	Method:	EPA 8015M
RE: Contract No. N00244-96-D-2009	Page 1 of 1	

All total petroleum hydrocarbon concentrations are reported in mg/kg (ppm) using a 1:1 gasoline:diesel fuel mixture as a standard.

Sample Number	Concentration	Reporting Limit
1085-98 (UST-541-SS-9'-CF01A)	ND	5
1086-98 (UST-730-SS-9'-CF01A)	ND	5
Method Blank	ND	5

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

Mare Island Naval Shipyard		Date Sampled:	10/16/98
Building 229, P. O. Box 2135		Date Received:	10/23/98
Vallejo, CA 94592-2135		Date Extracted:	10/23/98
		Date Analyzed:	10/23/98
		Work Order No.:	98-10-0563
Attn: Russ Finlinson		Method:	EPA 413.2
RE: Contract No. N00244-96-D-2009		Page 1 of 1	

All concentrations are reported in mg/kg (ppm).

Sample Number	Oil and Grease Concentration	Reporting Limit
1085-98 (UST-541-SS-9'-CF01A)	36	10
1086-98 (UST-730-SS-9'-CF01A)	16	10
Method Blank	ND	10

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 8015M - G & D

Mare Island Naval Shipyard — Work Order No.: 98-10-0563
Page 1 of 1 — Date Analyzed: 10/24/98

Matrix Spike/Matrix Spike Duplicate
Sample Spiked: 98-10-0559-1

Analyte	MS%REC	MSD%REC	Control Limits	%RPD	Control Limits
Total Petroleum Hydrocarbons	63	70	52 - 149	10	0 - 29

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Calscience
Environmental
Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 413.2

Mare Island Naval Shipyard		Work Order No.:	98-10-0563
Page 1 of 1		Date Analyzed:	10/14/98

Matrix Spike/Matrix Spike Duplicate

Sample Spiked: 98-10-0343-10

Analyte	MS%REC	MSD%REC	Control Limits	%RPD	Control Limits
Oil and Grease	108	106	55 - 135	2	0 - 30

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7440 LINCOLN WAY
GARDEN GROVE, CA 92641-1432
TEL: (714) 895-5494 FAX: (714) 894-7501

0563

CHAIN OF CUSTODY

DATE: 10-16-98 Page 1 OF 1

LABORATORY CLIENT: MINSY	CLIENT PROJECT NAME/NUMBER: MARE ISLAND BLDG 541 & 730
ADDRESS: SSPORTS ENVIRONMENTAL DETACHMENT	PROJECT CONTACT: ROBERT TURPIN (707) 562-3495
CITY: VALLEJO STATE: CA ZIP: 94592-0135	SAMPLER(S): (SIGNATURE) Robert Turpin S.U. 900emME9-99
TEL: (707) 562 - 3495 FAX: (707) 562 - 3497	

TURN AROUND TIME:
☐ SAME DAY (<6 HRS) 100% ☐ 24 HOURS, 50% ☐ 48 HOURS, 25% ☐ 5 DAYS ☒ 10 DAYS ☐ RUSH WRITTEN REPORT, 10%
1. All turnaround times are based on working hours of 8a.m., M-F. 2. Prior confirmation is strongly recommended. 3. 3 days for Tedlar bag samples

SPECIAL INSTRUCTIONS/REQUIREMENTS:

WRITTEN QC REPORT REQUIRED?
☐ ROUTINE QC ☐ RWQCB QC

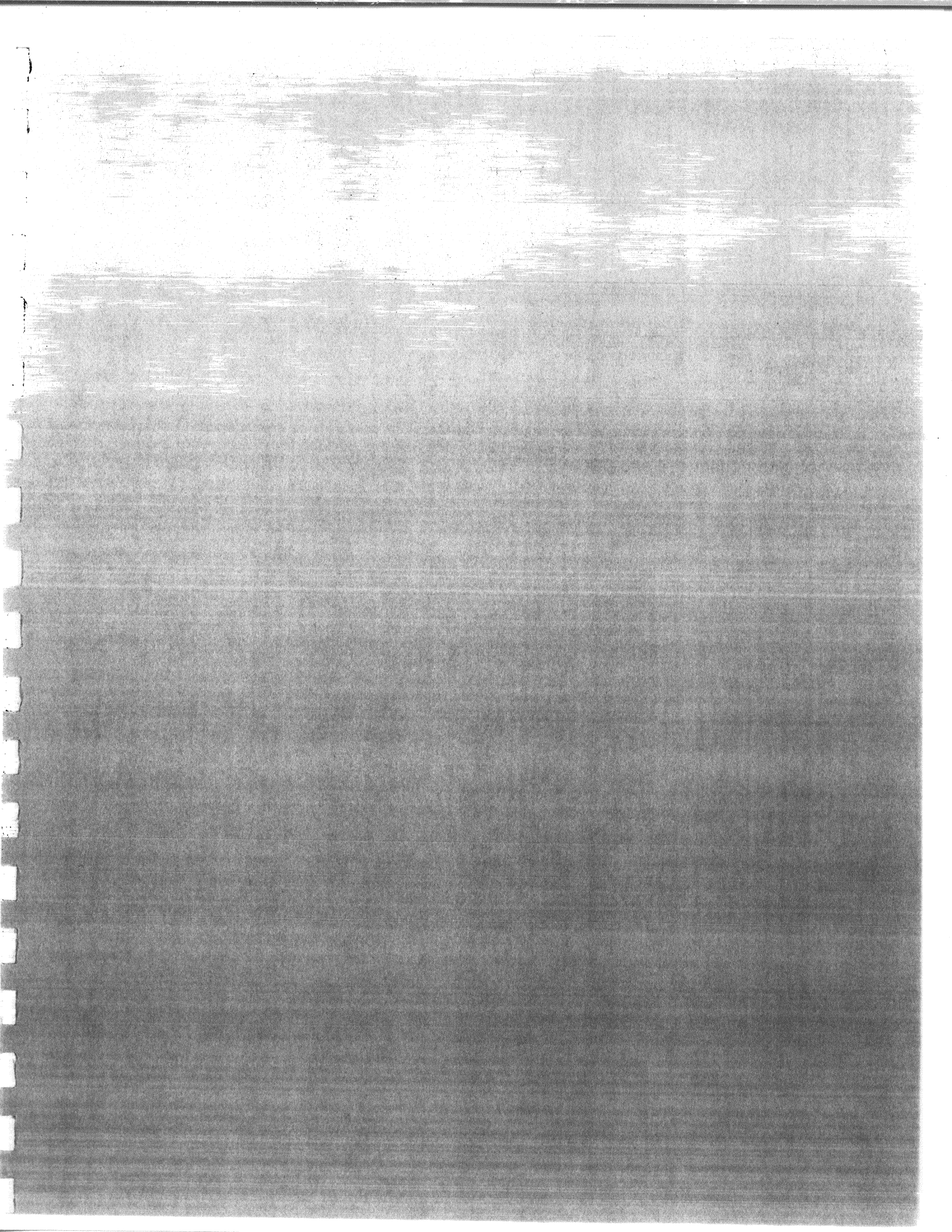
SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	~~WATER~~ Comp	~~WATER~~ Grab	PRESV HNO3	PRESV Other	Solid/ Soil/Filter	No. of Containers	ANALYSES REQUIRED
1085-98	UST541-SS-9'-CF01A	10-16-98	0740		✓	—			1	0018AR 0022AG
1086-98	UST-730-SS-9'-CF01A	10-16-98	0803		✓	—			1	↓ ↓

Relinquished by: (Signature) Robert Turpin	Received by: (Signature) Dan Choi	Date: 10-16-98	Time 1500
Relinquished by: (Signature) Dan Choi	Received by: (Signature)	Date:	Time
Relinquished by (Signature)	Received by: (Signature) JJ Patel	Date: 10/23/98	Time 0830

Unless otherwise requested, all samples will be disposed of 30 days after reciept.

20 BLANK

TOTAL P.12



APPENDIX B

B-1: RWQCB Site Information Summary

SITE INFORMATION SUMMARY

I. SITE INFORMATION

Site Facility Name: Mare Island	
Site Facility Address: Vallejo, CA 94592	
RWQCB LUST Case No.:	URF Filing Date:
Responsible Parties (include addresses and phone numbers)	
Terry Lau, Naval Facilities Engineering Command, Engineering Field Activity, West; 900 Commodore Drive, San Bruno, CA 94066 [650] 244-2589	

Tank No.	Size in Gallons	Contents	Closed In—Place/Removed?	Date
730	15	Diesel	Removed	07/02/98

II. INITIAL SITE ASSESSMENT (Information from previous investigations at nearby sites and other available sources may be used for applicable items if necessary)

Cause and Estimated Quantity of Release: None		
Nearest Surface Water Bodies (including any unnamed creeks, tributaries, canals etc.): Mare Island Strait	Their Geographical Distances From the Site: 70'	
Nearest Domestic Water Wells (both public and private) within 1000 ft: None	Their Geographical Distances From the Site: NA	
Minimum Groundwater Depth: > 9'	Max. Depth: Unknown	Flow Direction: Unknown
Site Ground Surface Elevation and Geology: Approximately 10' above mean sea level. Flat topography. Medium fill soil of sandstone with silty clay.		
Current Site and Surrounding land Use: The current site is not used. Future use of the site will be for heavy industry.		
Preferential Pathways Such as Subsurface Utilities? Yes No. If Yes, Describe. There are underground electrical rigid metal conduits within 3 1/2 feet of the excavation.		
Number of Soil Borings: None	Number of Monitoring Wells: None	

III. REMEDIATION

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Free Product	4 gallons	Placed in rail car with other petroleum liquid waste	1998
Soil	9 cubic yards	Disposal - B&J Landfill, Vacaville, CA	11/98
Groundwater			
Vapor			

COMMENTS
Free product removed from tank was mostly water.

MAXIMUM DOCUMENTED SOIL POLLUTANT CONCENTRATIONS

POLLUTANT	Location	Soil (ppm)		POLLUTANT	Location	Soil (ppm)	
	Date(s)	Initial	Residual		Date(s)	Initial	Residual
TPH (Gas)		NA		**Xylene**	Excavation Floor 8/4/1998	ND	
TPH (Diesel)		NA		**Ethylbenzene**	Excavation Floor 8/4/1998	ND	
Benzene	Excavation Floor 8/4/1998	ND		**Oil & Grease**	Excavation Floor 8/4/1998	390	16
Toluene	Excavation Floor 8/4/1998	ND		**Heavy Metals**		NA	
MTBE		NA		**Motor Oil**		NA	
Chlorinated Solvents		NA		**Other** **TPH-(Fuel Oil)**	Excavation Floor 8/4/1998	112	ND

GROUNDWATER CONCENTRATION (ppb) TRENDS AT SOURCE AREAS & PLUME/ SITE BOUNDARIES

Date	Location	Benzene	MTBE	TPH-g	TPH-d	Toluene	Ethyl benze	Xylene	Chlor. VOCs	Other	DTW
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

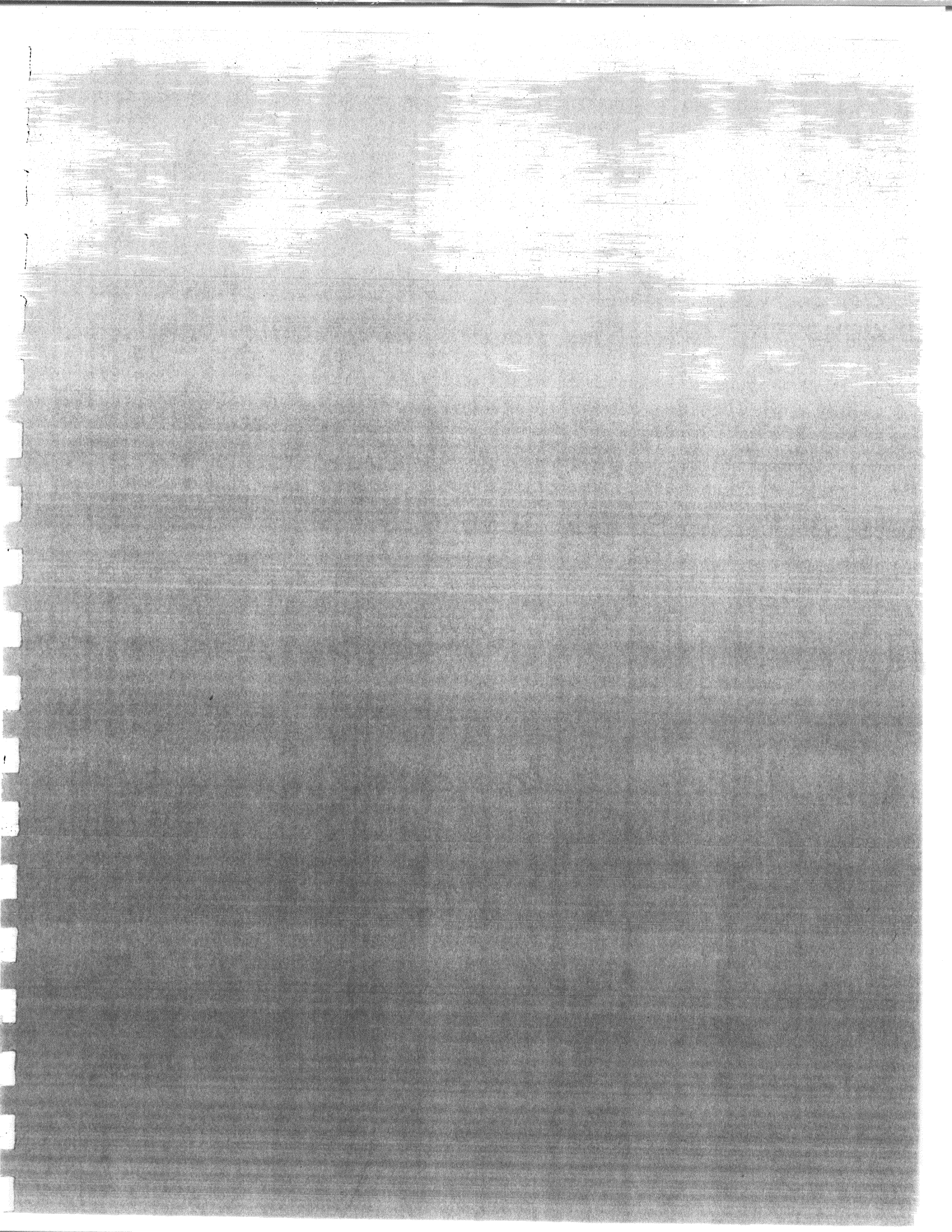
IV. LIST TECHNICAL REPORTS, CORRESPONDENCE ETC. IN CHRONOLOGICAL ORDER

TITLE/SUBJECT	DATE
1. Calscience Analytical Report - soil sample analysis	8/18/988
2. Calscience Analytical Report - soil sample analysis	10/29/98

V. ENCLOSE FOLLOWING FIGURES AND TABLES

1. Site maps showing locations of existing buildings, former/current UST areas, subsurface utilities and other pathways, groundwater flow direction etc.
2. Summary tables of all soil sampling results available, including any tank /excavation pit samples and confirmation samples, with sampling dates, location-identifications and depths (if applicable).
3. Summary tables of all groundwater sampling results available, including depth to water/product measurements, with sampling dates and location-identifications.
4. Figures showing all soil and groundwater sampling locations and monitoring well locations.

Additional Comments: See closure report for above information.



APPENDIX C

C-1 Solano County, Department of Environmental Management, Permit Approval Letter.

C-2 Application to Close an Underground Storage Tank for Hazardous Substances.

C-3 Notification to the State of California Water Resources Control Board.

Department of
Environmental Management
601 TEXAS STREET
FAIRFIELD, CALIFORNIA • 94533-6301

Environmental Health Division
(707) 421-6765

Clifford K. Covey, REHS, CHMM
Program Manager

June 2, 1998

Mr. Augustin Rodriquez
SSPORTS Environmental Detachment
P.O. Box 2135
Vallejo, CA 94592-0135

Re: Permit to Remove 1 x 2,000 Gallon Heating Oil Underground Storage Tank
Electrical Distribution Station Building 730, Mare Island, Vallejo; File #15011

Dear Rodriquez:

Your application to remove one underground storage tank has been approved subject to the following conditions as required by Chapter 13.5 of the Solano County Code and Title 23, Div. 3, Chapter 16, Article 7, California Code of Regulations:

1. The local Fire Department shall be notified of the pending removal operation and shall oversee the implementation of the Uniform Fire Code dealing specifically with matters of safety, purging of harmful vapors contained in the tanks and removal of the tanks from the above location.

2. Verification of the integrity of the existing tank system shall take place by inspection of the removed tanks after the outer surface has been scraped clean and inspection of the tank excavation by an Environmental Health Specialist.

3. Soil samples and/or water samples shall be required on the day of tank removal. Sampling shall be conducted in accordance with the Tri- Regional requirements. Results of the laboratory analysis shall be submitted for review by this Division within 30 days after sampling. The analyses listed in enclosure #1 shall be required on the soil and/or groundwater taken from the tank excavation.

4. With the exception of soils being accepted by a permitted Treatment Storage or Disposal (TSD) facility, no soils shall leave the site until the laboratory results of the soil samples required by enclosure # 1 have been examined by personnel of this office and a suitable receptacle for the soils has been established.

5. Contaminated backfill materials shall not be returned to the excavation pit, but shall be held on site with a barrier of cement, asphalt, visqueen, or other material deemed suitable by this office. The backfill materials shall be separated from native soils. A soil remediation plan shall be submitted if on-site treatment is proposed. Proof of legal disposal of contaminated soil shall be submitted within 30 days of disposal.

6. All materials removed from the tanks shall be containerized and treated as hazardous waste according to Division 20, Chapter 6.5 of the California Health and Safety Code.

7. All tanks shall be treated as hazardous waste and shall be directly transported to a California Department of Health Services licensed TSD facility by a licensed waste hauler utilizing the Uniform Hazardous Waste Manifest. The manifest number shall be provided to this office.

8. Technical reports, documents, and plans which contain engineering, geology, and/or geophysical information must be prepared by, or under the direction of, properly licensed individuals in the State of California, pursuant to Sections 6735, 7835, and 7835.1 of the Business and Professions Code. Responsibility for the technical information is indicated by signature and/or stamp of the seal of the responsible licensed individual(s). More than one signature and/or seal may be required where more than one professional specialty is included within the technical report, document, or plan submitted.

9. A detailed site safety plan shall be available on site at all times.

10. If during the removal process, a release of contaminate is found or threatened, warning signs shall be posted at the site. Proposition 65 pursuant to Section 25249.6 of the Calif Health & Safety Code, requires that no person in the course of doing business shall knowingly and intentionally expose any individual to a chemical known to the state to cause cancer or reproductive toxicity without first giving clear and reasonable warning.

11. The contractor shall maintain an appropriate contractor's license and hazardous materials certificate from the State Contractor's License Board.

12. **Forty-eight hours notice** shall be given to this office prior to initiating work at the site. An appointed time for the removal of the tanks shall be set. If that set time cannot be met by the Contractor, cancellation of that appointment shall be made at least 4 hours before the removal.

13. You must notify the BAAQMD of your removal plans.

14. **If you have not complied with the conditions of this permit (i.e. removal of tanks) by December 22, 1998, you shall have complied with the following:**

A. Empty tanks and submit copy of manifest demonstrating legal disposal of contents.
B. Except for required venting, seal all fill and access locations and piping using locking caps or concrete plugs.
C. Disconnect power to all pumps associated with the use of the underground storage tanks.
D. Inspect underground storage tanks quarterly to verify locks and seals are still in place and no liquids have been added to the tanks.
E. In accordance with LG-149, submit written plan to assess soil and groundwater contamination on site using borings and/or monitoring wells.
F. Request an inspector from our office verify (through a field inspection) that items A through D have been completed by December 22, 1998. You shall request this inspection at least 2 working days in advance. This inspection shall be completed by December 22, 1998.

The work listed in items A through E shall be completed by December 22, 1998. If this work is not completed by this date, and the underground storage tanks have not been removed in accordance with this permit, we may forward your case to the District Attorney's Office. This permit to remove is valid for one year.

Should you have any questions, please contact this office at (707) 421-6765.

Sincerely,

Bradley S. Nicolet
Senior Environmental Health Specialist

cc: 1. Vallejo Fire Department
2. Bay Area Air Quality Management District, 939 Ellis Street San Francisco, CA. 94109 Attn: Jack Bean
3. Vallejo Building Department

Enclosure # 1

ANALYSES/PROCEDURES REQUIRED FOR UNDERGROUND STORAGE TANK CLOSURES

WASTE OIL TANK

SOIL	WATER
TPH as Gas 5030/3550/8015M	5030/3550/8015M
TPH as Diesel 3550/8015M	3510/8015M
Oil and Grease 5520 or 413.1(EPA)	5520 C&F/413.2(EPA)
Halogenated Hydrocarbons:	
8010 or 8240/8260	601 or 624/8260
BTEX 8020 or 8240/8260	602 or 624/8260
ICAP Metals:	
Cd, Cr, Pb, Ni, Zn 6010	Same
PCB's 8080	Same

FUEL, GASOLINE OR DIESEL TANK

SOIL	WATER
TPHg or TPHd 5030/8020/8015M	5030/3510/8015M
BTEX & MTBE 8020 or 8240/8260	602 or 624 or 8260
Total Lead 6010	Same

Notes:

Samples are normally taken 2 feet into native soil on the basis of:
- one sample under the tank fill end for tanks under 1,000 gallons
- two samples, one under each end of a tank up to 10,000 gallons
- three samples, one under the ends and one under the center of tanks over 10,000 gallons.

If groundwater is encountered, the same number of samples shall be taken 6 " above the soil/groundwater interface and one sample taken of the groundwater. The excavation may be purged of water prior to obtaining the water sample. (Sampling from the saturated zone is recommended as a source of additional useful data).

Excavated materials in the spoils pile shall be sampled as a 4:1 composite sample each 50 cubic yards or as a discrete sample each 20 cubic yards.

Product lines shall be sampled every 20 linear feet beginning at the entry point to the tank excavation and measured backward to the pump or fill with both ends sampled as a minimum.

Additional samples may be required if observed conditions warrant further data.

Department of
Environmental Management
601 TEXAS STREET
FAIRFIELD, CALIFORNIA • 94533-6301

File # _____

APPLICATION TO CLOSE AN UNDERGROUND STORAGE TANK FOR HAZARDOUS SUBSTANCES

REMOVE ✓ TEMPORARY CLOSURE _____ CLOSE IN PLACE _____

Applicant: SPORTS ENVIRONMENTAL DETACHMENT
Address: P.O. BOX 2135 VALLEJO CA, 94592-0135
Company / Agency: MARE ISLAND CARETAKER SITE OFFICE
Address: P.O. BOX 2193 VALLEJO CA 94592 Phone #: 707-562-3070

SITE LOCATION

Facility Name: MARE ISLAND
Facility Address: P.O. BOX 2193
Property Owner: DEPARTMENT OF THE NAVY Phone #: _____
Tank(s) Owner: U.S. NAVY Phone #: 707-562-3094
Business Owner: U.S. NAVY Phone #: 650-244-2589

WORKERS' COMPENSATION DECLARATION

I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab. C.). Certified copy is hereby furnished N/A Certified copy is filed with Solano County N/A
Applicant: N/A Exp. Date: N/A Policy #: N/A Company: N/A

CERTIFICATE OF EXEMPTION FROM WORKERS' COMPENSATION INSURANCE

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Applicant _____ Date 5/4/98

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CALIFORNIA INDUSTRIAL SAFETY PERMIT CLASSIFICATION

I hereby certify that no excavation five(5) or more feet in depth into which a person is required to descend, will be made in connection with work authorized by this permit. (Chap. 3.2, Grp. 2, Art. 2, Sec. 341, Title 8, CCR). MZ Initial

As owner-builder, I will not perform or employ anyone to do work which would require a permit from the Division of Industrial Safety, unless such person has a permit to such work from the division. MZ Initial

Division of Industrial Safety Permit No.: N/A

I certify that I have read this application and state that the above information is true and accurate to the best of my knowledge. I agree to comply with all applicable county ordinances, State and Federal laws, and hereby authorize representatives of this county to enter upon the above-mentioned property for inspections purposes.

Applicant's Signature _____ Date 5/4/98

CONTRACTOR/LICENSES

Contractor's Business Name: SSPORTS ENVIRONMENTAL DETACHMENT

Contact Person: AUGUSTIN RODRIGUEZ Phone #: 707-562-3244

Mailing Address: P.O. BOX 2135 VALLEJO CA

Consultant: N/A Phone #: N/A

State Contractor's License # N/A Type: N/A

TANK DATA

Number of tanks to be: Removed 3 Closed in Place NONE

Temporarily Closed NONE Remaining after proposed closures NONE

Note: Submit State A Form for the site and State B Form for each tank.

	Tank A(A71W)	Tank B(541)	Tank C(730)	Tank D	Tank E
Capacity	2,000 gal	2,000 gal	2,000 gal		
Contents	DIESEL	HEATING OIL	HEATING OIL		
Steel or FRP	STEEL	STEEL	STEEL		
Age	UNKNOWN	UNKNOWN	UNKNOWN		

PLOT PLAN

Attach a plot plan which shows the following:

- Plot plan scale and north arrow
- Location of tank(s) and associated piping
- Location of sewer, electrical, water, & gas lines
- Location of buildings and property lines
- Location of water wells and groundwater monitoring wells

SITE SAFETY PLAN

Attach a site safety plan that addresses, as a minimum, the following:

- Anticipated physical hazards, overhead, equipment etc.
- Fire/explosion prevention measures (meter required)
- Excavation entry procedures, sloping and shoring
- Protective clothing and chemical hazards
- Confined space entry
- Emergency medical procedures, evacuation

CLOSURE-BASIC REQUIREMENTS

By what method will all residual vapors, liquids, solids, or sludge be removed?

TANK WILL BE INERTED WITH DRY-ICE

What licensed hazardous waste hauler will transport hazardous waste and or underground tanks?

ECOLOGY CONTROL INDUSTRIES.

What laboratory, licensed by the California Department of Health Services, will perform analysis?

CALSCIENCE ENVIRONMENTAL LABS INC. 1-800-566-5221

Who is the sample collector? SSPORTS ENVIRONMENTAL DETACHMENT

What is the destination for residual hazardous wastes? ECOLOGY CONTROL SERVICES.

Environmental Protection Agency ID. No. under which tank will be manifested? CA7170024775

REMOVAL

What is the destination of the underground tank(s)? Ecology Control Industries

The required number of soil samples per tank shall be:

<1,000 gallons - 1; >1,000 - 9999 gallons -2; >10,000 gallons - 3

Also required to be sampled: Groundwater - 1 (if present); Piping every 20 linear feet; Excavated soil every 50 cubic yards (composite 4:1) or every 20 cubic yards (discrete)

TEMPORARY CLOSURE

Where will power be disconnected? N/A

What method will be used to seal access locations? N/A

Frequency of inspection to verify tank(s) empty and seals in place? N/A

CLOSURE IN PLACE

Basis for requesting Closure in Place: N/A

Will piping be removed or emptied and capped?

What inert solid will be used to fill the tank?

Is the proposed boring location at the centerline or at the tank ends?

Depth to groundwater?

What is the verified groundwater gradient?

What is the location of the monitoring well?

= =

Note: Additional samples may be required subject to mitigating conditions encountered at the time of removal, or closure in place e.g. groundwater, condition of tank(s) and piping, contamination, etc. Samples taken during soil boring or monitoring well installation shall be at every 5 feet, to and including groundwater, and as lithology changes.

You must notify the Fire Department and Air Quality District having jurisdiction. Submit findings of all soils and/or groundwater sampling and analysis done pursuant to this closure to determine extent of any contamination within 30 days of removal.

All Clean-up Proposals must be submitted in report form to the Environmental Health Services Division before any actual work is begun. The Division shall be provided with at least a 48 hour notice prior to the closure of the tank(s). Fees must be paid with the permit application.

= =

I certify that I have read this application and state that the above information is correct. I agree to comply with all applicable county ordinances, State and Federal laws relating to underground storage tank closure, and hereby authorize representatives of this county to enter upon the above-mentioned property for inspections purposes.

Applicant's Signature [signature] Date 5/4/98

G:NewRemo1.frm

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM A

COMPLETE THIS FORM FOR EACH FACILITY/SITE

MARK ONLY ONE ITEM: ☐ 1 NEW PERMIT ☐ 2 INTERIM PERMIT ☐ 3 RENEWAL PERMIT ☐ 4 AMENDED PERMIT ☐ 5 CHANGE OF INFORMATION ☑ 7 PERMANENTLY CLOSED SITE ☐ 6 TEMPORARY SITE CLOSURE

I. FACILITY/SITE INFORMATION & ADDRESS - (MUST BE COMPLETED)

DBA OR FACILITY NAME	NAME OF OPERATOR	
MARE ISLAND BLDG 730	N/A (ABANDONED)	
ADDRESS: P.O. BOX 2193	NEAREST CROSS STREET	PARCEL # (OPTIONAL)
CITY NAME: VALLEJO	STATE: CA / ZIP CODE: 94592-0135	SITE PHONE # WITH AREA CODE: 707-562-3244

✓ BOX TO INDICATE: ☐ CORPORATION ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ LOCAL-AGENCY DISTRICTS * ☐ COUNTY-AGENCY * ☐ STATE-AGENCY * ☑ FEDERAL-AGENCY *

* If owner of UST is a public agency, complete the following: name of Supervisor of division, section, or office which operates the UST _____

TYPE OF BUSINESS	☐ IF INDIAN RESERVATION OR TRUST LANDS	# OF TANKS AT SITE	E. P. A. I. D. # (optional)
☐ 1 GAS STATION ☐ 2 DISTRIBUTOR ☐ 3 FARM ☐ 4 PROCESSOR ☑ 5 OTHER	☐	1	N/A

EMERGENCY CONTACT PERSON (PRIMARY)		EMERGENCY CONTACT PERSON (SECONDARY) - optional	
DAYS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE	DAYS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE
MARE ISLAND DISPATCH	707-562-3040		
NIGHTS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE	NIGHTS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE
MARE ISLAND DISPATCH	707-562-3040		

II. PROPERTY OWNER INFORMATION - (MUST BE COMPLETED)

NAME	CARE OF ADDRESS INFORMATION		
MARE ISLAND CARETAKER SITE OFFICE			
MAILING OR STREET ADDRESS: P.O. BO 2193	✓ box to indicate: ☐ INDIVIDUAL ☐ LOCAL-AGENCY ☐ STATE-AGENCY ☐ CORPORATION ☐ PARTNERSHIP ☐ COUNTY-AGENCY ☑ FEDERAL-AGENCY		
CITY NAME: VALLEJO	STATE: CA	ZIP CODE: 94592	PHONE # WITH AREA CODE: 707-562-3070

III. TANK OWNER INFORMATION - (MUST BE COMPLETED)

NAME OF OWNER	CARE OF ADDRESS INFORMATION		
MARE ISLAND CARETAKER SITE OFFICE			
MAILING OR STREET ADDRESS: P.O. Box 2193	✓ box to indicate: ☐ INDIVIDUAL ☐ LOCAL-AGENCY ☐ STATE-AGENCY ☐ CORPORATION ☐ PARTNERSHIP ☐ COUNTY-AGENCY ☑ FEDERAL-AGENCY		
CITY NAME: VALLEJO	STATE: CA	ZIP CODE: 94592	PHONE # WITH AREA CODE: 707-562-3070

IV. BOARD OF EQUALIZATION UST STORAGE FEE ACCOUNT NUMBER - Call (916) 322-9669 if questions arise.

TY (TK) HQ 44- _____ N/A FEDERAL FACILITY

V. PETROLEUM UST FINANCIAL RESPONSIBILITY - (MUST BE COMPLETED) – IDENTIFY THE METHOD(S) USED

✓ box to indicate: ☑ 1 SELF-INSURED ☐ 2 GUARANTEE ☐ 3 INSURANCE ☐ 4 SURETY BOND ☐ 5 LETTER OF CREDIT ☐ 6 EXEMPTION ☐ 99 OTHER _____

VI. LEGAL NOTIFICATION AND BILLING ADDRESS

Legal notification and billing will be sent to the tank owner unless box I or II is checked.

CHECK ONE BOX INDICATING WHICH ABOVE ADDRESS SHOULD BE USED FOR LEGAL NOTIFICATIONS AND BILLING: I. ☐ II. ☐ III. ☐

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

OWNER'S NAME (PRINTED & SIGNED)	OWNER'S TITLE	DATE MONTH/DAY/YEAR

LOCAL AGENCY USE ONLY

COUNTY #	JURISDICTION #	FACILITY #

LOCATION CODE - *OPTIONAL*	CENSUS TRACT # - *OPTIONAL*	SUPVISOR - DISTRICT CODE - *OPTIONAL*

THIS FORM MUST BE ACCOMPANIED BY AT LEAST (1) OR MORE PERMIT APPLICATION - FORM B, UNLESS THIS IS A CHANGE OF SITE INFORMATION ONLY.

OWNER MUST FILE THIS FORM WITH THE LOCAL AGENCY IMPLEMENTING THE UNDERGROUND STORAGE TANK REGULATIONS

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.

MARK ONE ITEM: [ ] 1 NEW PERMIT [ ] 2 INTERIM PERMIT [ ] 3 RENEWAL PERMIT [ ] 4 AMENDED PERMIT [ ] 5 CHANGE OF INFORMATION [ ] 6 TEMPORARY TANK CLOSURE [ ] 7 PERMANENTLY CLOSED ON SITE [✓] 8 TANK REMOVED

DBA OR FACILITY NAME WHERE TANK IS INSTALLED: MARE ISLAND

I. TANK DESCRIPTION
COMPLETE ALL ITEMS – SPECIFY IF UNKNOWN

A. OWNER'S TANK I. D. # UST 730
B. MANUFACTURED BY: UNKNOWN
C. DATE INSTALLED (MO/DAY/YEAR) UNKNOWN
D. TANK CAPACITY IN GALLONS: 2,000 GAL.

II. TANK CONTENTS
IF A-1 IS MARKED, COMPLETE ITEM C.

A. [ ] 1 MOTOR VEHICLE FUEL [ ] 2 PETROLEUM [ ] 3 CHEMICAL PRODUCT [✓] 4 OIL [ ] 80 EMPTY [ ] 95 UNKNOWN
B. [✓] 1 PRODUCT [ ] 2 WASTE
C. [ ] 1a REGULAR UNLEADED [ ] 1b PREMIUM UNLEADED [ ] 1c MIDGRADE UNLEADED [ ] 2 LEADED [ ] 3 DIESEL [ ] 4 GASAHOL [ ] 5 JET FUEL [ ] 6 AVIATION GAS [ ] 7 METHANOL [ ] 8 M85 [ ] 99 OTHER (DESCRIBE IN ITEM D. BELOW)

D. IF (A.1) IS NOT MARKED, ENTER NAME OF SUBSTANCE STORED HEATING OIL
C. A. S. #: 68334-30-5

III. TANK CONSTRUCTION
MARK ONE ITEM ONLY IN BOXES A, B, AND C, AND ALL THAT APPLIES IN BOX D AND E

A. TYPE OF SYSTEM: [ ] 1 DOUBLE WALL [✓] 2 SINGLE WALL [ ] 3 SINGLE WALL WITH EXTERIOR LINER [ ] 4 SINGLE WALL IN A VAULT [ ] 5 INTERNAL BLADDER SYSTEM [ ] 95 UNKNOWN [ ] 99 OTHER

B. TANK MATERIAL (Primary Tank): [✓] 1 BARE STEEL [ ] 2 STAINLESS STEEL [ ] 3 FIBERGLASS [ ] 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC [ ] 5 CONCRETE [ ] 6 POLYVINYL CHLORIDE [ ] 7 ALUMINUM [ ] 8 100% METHANOL COMPATIBLE W/FRP [ ] 9 BRONZE [ ] 10 GALVANIZED STEEL [ ] 95 UNKNOWN [ ] 99 OTHER

C. INTERIOR LINING OR COATING: [ ] 1 RUBBER LINED [ ] 2 ALKYD LINING [ ] 3 EPOXY LINING [ ] 4 PHENOLIC LINING [ ] 5 GLASS LINING [✓] 6 UNLINED [ ] 95 UNKNOWN [ ] 99 OTHER
IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? YES ___ NO ___

D. EXTERIOR CORROSION PROTECTION: [ ] 1 POLYETHYLENE WRAP [ ] 2 COATING [ ] 3 VINYL WRAP [ ] 4 FIBERGLASS REINFORCED PLASTIC [ ] 5 CATHODIC PROTECTION [✓] 91 NONE [ ] 95 UNKNOWN [ ] 99 OTHER

E. SPILL AND OVERFILL, etc. SPILL CONTAINMENT INSTALLED (YEAR) N/A DROP TUBE YES ___ NO ✓ OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) N/A STRIKER PLATE YES ___ NO ✓ DISPENSER CONTAINMENT YES ___ NO ✓

IV. PIPING INFORMATION
CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND, BOTH IF APPLICABLE

A. SYSTEM TYPE: A (U) 1 SUCTION; A U 2 PRESSURE; A U 3 GRAVITY; A U 4 FLEXIBLE PIPING; A U 99 OTHER
B. CONSTRUCTION: A (U) 1 SINGLE WALL; A U 2 DOUBLE WALL; A U 3 LINED TRENCH; A U 95 UNKNOWN; A U 99 OTHER
C. MATERIAL AND CORROSION PROTECTION: A (U) 1 BARE STEEL; A U 2 STAINLESS STEEL; A U 3 POLYVINYL CHLORIDE (PVC); A U 4 FIBERGLASS PIPE; A U 5 ALUMINUM; A U 6 CONCRETE; A U 7 STEEL W/ COATING; A U 8 100% METHANOL COMPATIBLE W/FRP; A U 9 GALVANIZED STEEL; A U 10 CATHODIC PROTECTION; A U 95 UNKNOWN; A U 99 OTHER
D. LEAK DETECTION: [ ] 1 MECHANICAL LINE LEAK DETECTOR [ ] 2 LINE TIGHTNESS TESTING [ ] 3 CONTINUOUS INTERSTITIAL MONITORING [ ] 4 ELECTRONIC LINE LEAK DETECTOR [ ] 5 AUTOMATIC PUMP SHUTDOWN [ ] 99 OTHER

V. TANK LEAK DETECTION

[ ] 1 VISUAL CHECK [ ] 2 MANUAL INVENTORY RECONCILIATION [ ] 3 VADOZE MONITORING [ ] 4 AUTOMATIC TANK GAUGING [ ] 5 GROUND WATER MONITORING [ ] 6 ANNUAL TANK TESTING [ ] 7 CONTINUOUS INTERSTITIAL MONITORING [ ] 8 SIR [ ] 9 WEEKLY MANUAL TANK GAUGING [ ] 10 MONTHLY TANK TESTING [✓] 95 UNKNOWN [ ] 99 OTHER

VI. TANK CLOSURE INFORMATION (PERMANENT CLOSURE IN-PLACE)

1. ESTIMATED DATE LAST USED (MO/DAY/YR)
2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING _____ GALLONS
3. WAS TANK FILLED WITH INERT MATERIAL? YES [ ] NO [ ]

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

TANK OWNER'S NAME (PRINTED & SIGNATURE) | DATE

LOCAL AGENCY USE ONLY
THE STATE I.D. NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW

STATE I.D.# | COUNTY # | JURISDICTION # | FACILITY # | TANK #

PERMIT NUMBER | PERMIT APPROVED BY/DATE | PERMIT EXPIRATION DATE

THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED. FORM C MUST BE COMPLETED FOR INSTALLATIONS. THIS FO SHOULD BE ACCOMPANIED BY A PLOT PLAN. FILE THIS FORM WITH THE LOCAL AGENCY IMPLEMENTING THE UNDERGROUND STORAGE TANK REGULATIONS

Attachment 2

Site Summary Form

14-May-02

Facility Name: Mare Island Naval Shipyard

Site: 730 **RB File No.:** 48-9226 GJR **County:** 48

Address: 15th St. & California Ave.
Vallejo, CA 94592

Nearest Surface Water: Mare Island Strait
Distance to SW (ft.): 70
Potential Ecological Risk:
Water Wells Affected?: No **Distance to Wells (ft):** NA
Groundwater Benef. Use: non-potable

Pit Samples Submitted?: Yes
No. Borings:
No. Wells:
Ground Elev. (ft.): 10 feet above
Future Land Use: Industrial
Current Land Use: Industrial

Highest GW Depth (ft): 7.5
Lowest GW Depth(ft): 9.0
Direction of GW Flow: East

Staff Notes:
Human Health Risk:
Geology:
Comments: Groundwater depths were taken from the Investigation Area C3 Sampling and Analysis Plan, CH2M HILL, March 2002.
Management Rqmts:
Reports: SSPORTS. 1998. Removal Summary Report for Underground Storage Tank Site 730. December 21.

Remedial Activity

	Action Taken	Amount
Free Product:		
Soil:		
Ground Water:		
Vapor:		

Groundwater Results, ppb

DATE	LOCATION	TPH-G	TPH-D	BENZENE	TOLUENE	XYLENE	ETHYLBENZENE	MTBE	HVOC	OTHERS	GW DEPTH

Soil Results, ppm

		TPH-gas		TPH-diesel		BENZENE		TOLUENE		XYLENE		ETHYLBENZENE		MTBE		OTHER	
DATE	LOCATION	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
08/04/199	15th St. & Californ						<0.005		<0.005		<0.010		<0.005			TPH-Fuel Oil, 112: Oil and Grease, 390	
	COMMENTS																
10/16/199	15th St. & Californ																TPH-Gasoline:Diesel fuel, <5: Oil and Grease, 16
	COMMENTS																

Tank Information

TANK NO.	TANK SIZE (gal)	TANK CONTENTS	TANK ACTION	DATE	LATITUDE	LONGITUDE
730	15	Diesel	Removed	08/05/1998	38.09	-122.259

Attachment 2

Site Summary Form

14-May-02

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Water Wells Affected?: No **Distance to Wells (ft):** NA
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No. Wells:
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Future Land Use: Industrial
Current Land Use: Industrial

Highest GW Depth (ft): 7.5
Lowest GW Depth(ft): 9.0
Direction of GW Flow: East

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Human Health Risk:
Geology:
Comments: Groundwater depths were taken from the Investigation Area C3 Sampling and Analysis Plan, CH2M HILL, March 2002.
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Reports: SSPORTS. 1998. Removal Summary Report for Underground Storage Tank Site 730. December 21.

Remedial Activity

	Action Taken	Amount
Free Product:		
Soil:		
Ground Water:		
Vapor:		

Groundwater Results, ppb

DATE	LOCATION	TPH-G	TPH-D	BENZENE	TOLUENE	XYLENE	ETHYLBENZENE	MTBE	HVOC	OTHERS	GW DEPTH

Soil Results, ppm

		TPH-gas		TPH-diesel		BENZENE		TOLUENE		XYLENE		ETHYLBENZENE		MTBE		OTHER	
DATE	LOCATION	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
08/04/199	15th St. & Califorr						<0.005		<0.005		<0.010		<0.005			TPH-Fuel Oil, 112: Oil and Grease, 390	
	COMMENTS																
10/16/199	15th St. & Califorr																TPH-Gasoline:Diesel fuel, <5: Oil and Grease, 16
	COMMENTS																

Tank Information

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